

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1 1. (Currently Amended) In a node of a telecommunications network, which node comprises
2 redundant routing processor modules, each redundant routing processor module including a
3 primary control processor, a run time control processor, a message processor and a distributed
4 layer processor, one module being an active module and the other an inactive module, a method
5 of maintaining the inactive module in hot standby mode with the active module, comprising
6 steps of:

7 coordinating operations of the run time control processors, the message processors, and
8 the distributed layer processors, with the primary control processors,

9 allocating resources between the message processors and the distributed layer processors
10 with the runtime control processors,

11 sending from the message processor of the active module to the distributed layer
12 processor of the inactive module only a status affecting message which affects the status of a
13 connection being held by the active module by filtering out all signaling messages, and

14 updating only a state machine and routing table in the distributed layer processor of the
15 inactive module in response to the status affecting message so that the inactive module is
16 maintained in hot standby with the active module.

1 2. (Currently Amended) The method according to claim 1, wherein the active module holds
2 the connection by exchanging signaling messages, the method further comprising ~~steps- the step~~
3 ~~of: the active module filtering out among the signaling messages only status affecting messages,~~
4 and

5 sending a synchronization message to the inactive module, the synchronization message
6 containing information on how ~~the a~~ status of the connection has been changed.

1 3. (Previously Presented) The method according to claim 2, wherein the active module
2 holds routing information, makes decisions based on the exchanged signaling messages and
3 updates the routing information, the method further comprising a step of:

4 the active module sending the synchronization message to the inactive module, the
5 synchronization message containing the decisions which affect the status of the connection.

1 4. (Original) The method according to claim 3, wherein the status of connections is affected
2 by setup, modification, and teardown of a connection.

1 5. (Original) The method according to claim 4, wherein the connection is a label switched
2 path and the routing processor module performs protocols for managing the label switched path.

1 6. (Original) The method according to claim 5, wherein the processor module is ~~an MPLS~~
2 a MultiProtocol Label Switching (MPLS) processor module for managing the label switched

3 path, the signaling messages are RSVP messages, and the status affecting messages are messages
4 indicating connection setup, modification, and teardown.

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1 7. (Original) The method according to claim 6, wherein the signaling messages to be filtered
2 are refresh related messages.

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1 8. (Original) The method according to claim 7, wherein the synchronization messages
2 contain information concerning any of resources, endpoint information, forwarding table entries,
3 and label switched path ID.

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1 9. (Currently Amended) In a node of a telecommunications network, which node comprises
2 ~~redundant-MPLS~~ MultiProtocol Label Switching (MPLS) processor modules, each redundant
3 MPLS routing processor module including a primary control processor, a run time control
4 processor, a message processor and a distributed layer processor, one module being an active
5 module and the other an inactive module, a method of maintaining the inactive module in hot
6 standby mode with the active module, comprising steps of:

7 coordinating operations of the run time control processors, the message processors, and
8 the distributed layer processors, with the primary control processors,

9 allocating resources between the message processors and the distributed layer processors
10 with the runtime control processors,

11 sending from the message processor of the active module to the distributed layer
12 processor of the inactive module only a status affecting message which affects the status of an
13 label switched path being held by the active module by filtering out all signaling messages,
14 updating only a state machine and routing table in the distributed layer processor of the
15 inactive module in response to the status affecting message so that the inactive module is
16 maintained in hot standby with the active module, and
17 performing an activity switch from the active module to the inactive module to reverse
18 the roles of both modules so that the label switched path is now held by the newly active module
19 and the newly inactive module is maintained in hot standby.

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1 10. (Original) The method according to claim 9, further comprising a step of:

2 the newly active module performing an audit of the label switched paths before the
3 activity switch is performed.

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1 11. (Currently Amended) A telecommunications node comprising two routing control cards
2 which are interchangeably maintained as active and inactive at any one time, each of the control
3 cards comprising:

4 a distributed processor for running protocols for managing a communications path,

5 a message processor for sending synchronization messages to the other control card to

6 update the distributed processor of the other control card wherein a state machine and a routing

7 | table are updated in accordance with said synchronization messages without processing any
8 | signaling messages,

9 | a run time control processor for allocating resources between the message processor and
10 | the distributed processor, and

11 | a primary control processor for coordinating operations of the run time control processor,
12 | the message processor and the distributed processor,

13 | characterized in that

14 | while being maintained active, the distributed processor processes all signaling messages
15 | concerning the communications path and generates the synchronization messages indicating new
16 | status when the status of the communications path has changed, and

17 | while being maintained inactive, the distributed processor for receiving the
18 | synchronization messages from the other control card to stay synchronized with the distributed
19 | processor of the other control card.

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2 | 12. (Currently Amended) The node according to claim 11, wherein the communications path
3 | is a label switched path and the active and inactive control cards comprise state-machine
4 | machines for managing the label switched path and the synchronization messages containing
5 | new decisions made by the active control card and new forwarding table, and upon updating, the
6 | inactive control card comprises an updated state machine and forwarding table which have been
7 | updated in accordance with the decisions and the new forwarding table.

1 13. (Currently Amended) The node according to claim 12, wherein ~~the~~ both state machines
2 ~~run MPLS~~ a MultiProtocol Label Switching (MPLS) protocol, the node further comprising a
3 control processor for performing an activity switch from the active control card to the inactive
4 control card to reverse the roles of the control cards so that the label switched path is now held
5 by the then inactive control card and the then active control card is maintained in hot standby.

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1 14. (Original) The node according to claim 13, wherein the synchronization messages
2 contain information concerning any of resources, endpoint information, forwarding table entries,
3 and label switched path ID.